

Utah Department of Transportation Traffic Management Division

June 2016

Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov

Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

Traffic Operations Center



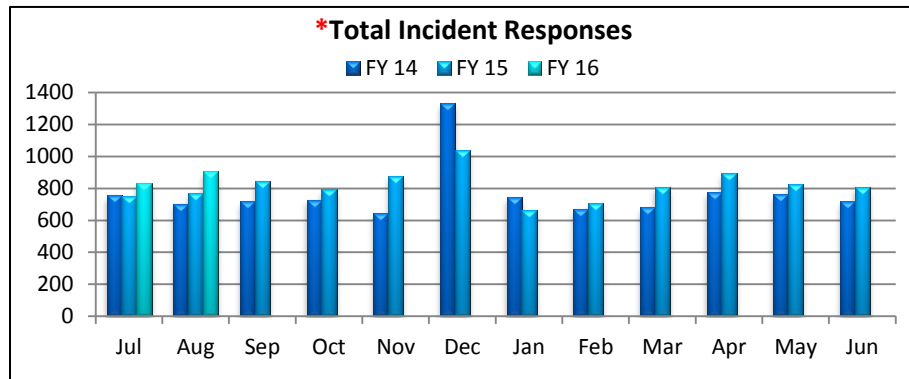
Field Devices Summary

Freeway PTZ Cameras	385
Surface Street PTZ Cameras	474
RWIS & Contracted Weather Cameras	216
Viewable Detection Cameras	59
Total Cameras	1,134
Freeway VMS	98
Surface Street VMS	57
Portable TOC VMS	7
Legacy Trucks Prohibited VMS	21
Variable Speed Limit VMS	15
Chain-Up / Avalanche Warning Signs	21
Total VMS	219
HAR (27 permanent/5 portable)	32
RWIS	99
Ramp Meters	63
TMS	551
Express Lane Plazas	73
Traffic Signals	2,170

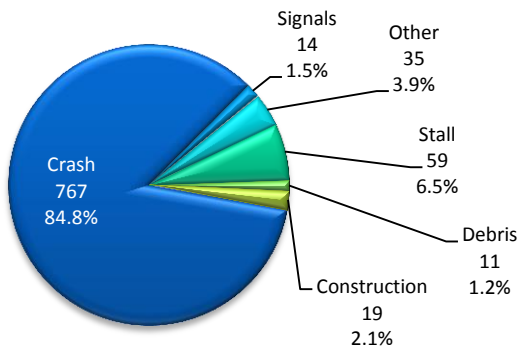
Operations Summary

VMS Messages Displayed	84,041
Signal Timing Work Orders	30
Signal Maintenance Work Orders	198
All New Work Orders	518
Work Orders Closed During the Month	565
Incident Responses by the TOC	905
Incident Duration Average Minutes	58
IMT Assists	2,852
Website Visitor Sessions	88,102
511 Calls	8,920
Weather Desk Calls	196
Ask Commuterlink Questions	83
Average Speed AM Peak (07:00-08:00)	68.13
Average Speed PM Peak (17:00-18:00)	60.89
Incidents Using Signal Timing Assistance	95
UDOT Traffic Followers and Re-tweets	332,703
UDOT Traffic App Total Downloads	2,650

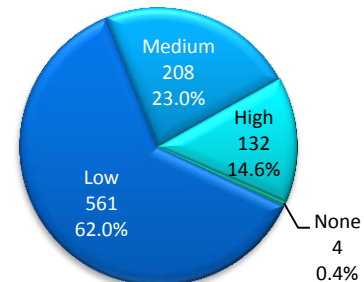
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



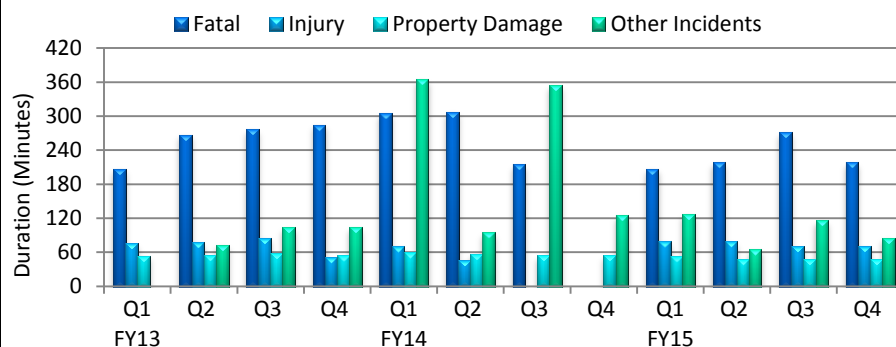
***Incidents By Type for August 2015**



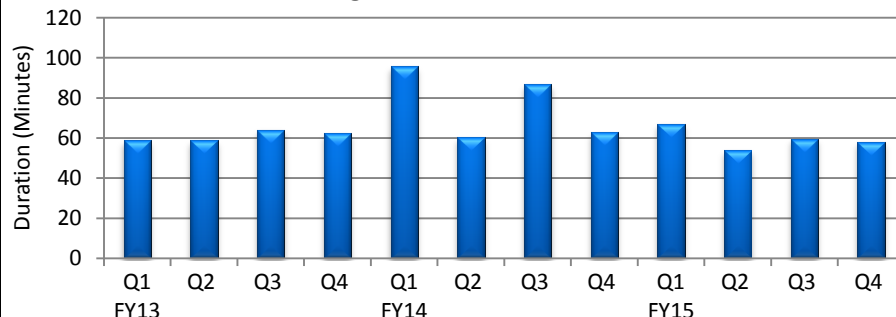
***Incidents by Severity for August 2015**



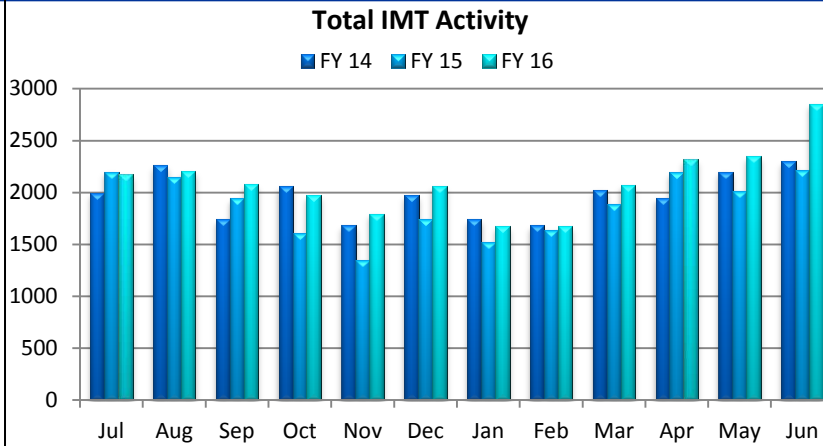
***Average Crash Duration**



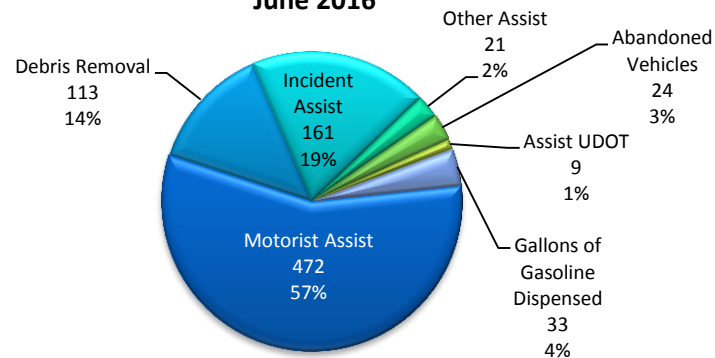
***Average Duration of All Incidents**



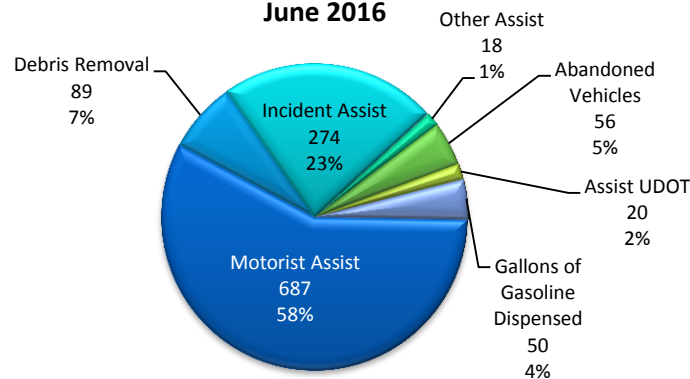
Incident Management Team (IMT) Activities



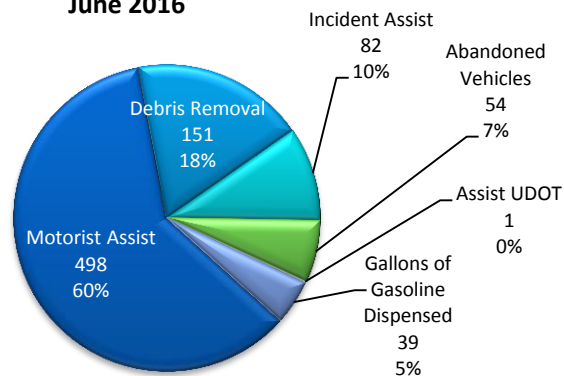
**IMT Activities by Type for UDOT Region 1
June 2016**



**IMT Activities by Type for UDOT Region 2
June 2016**



**IMT Activities by Type for UDOT Region 3
June 2016**



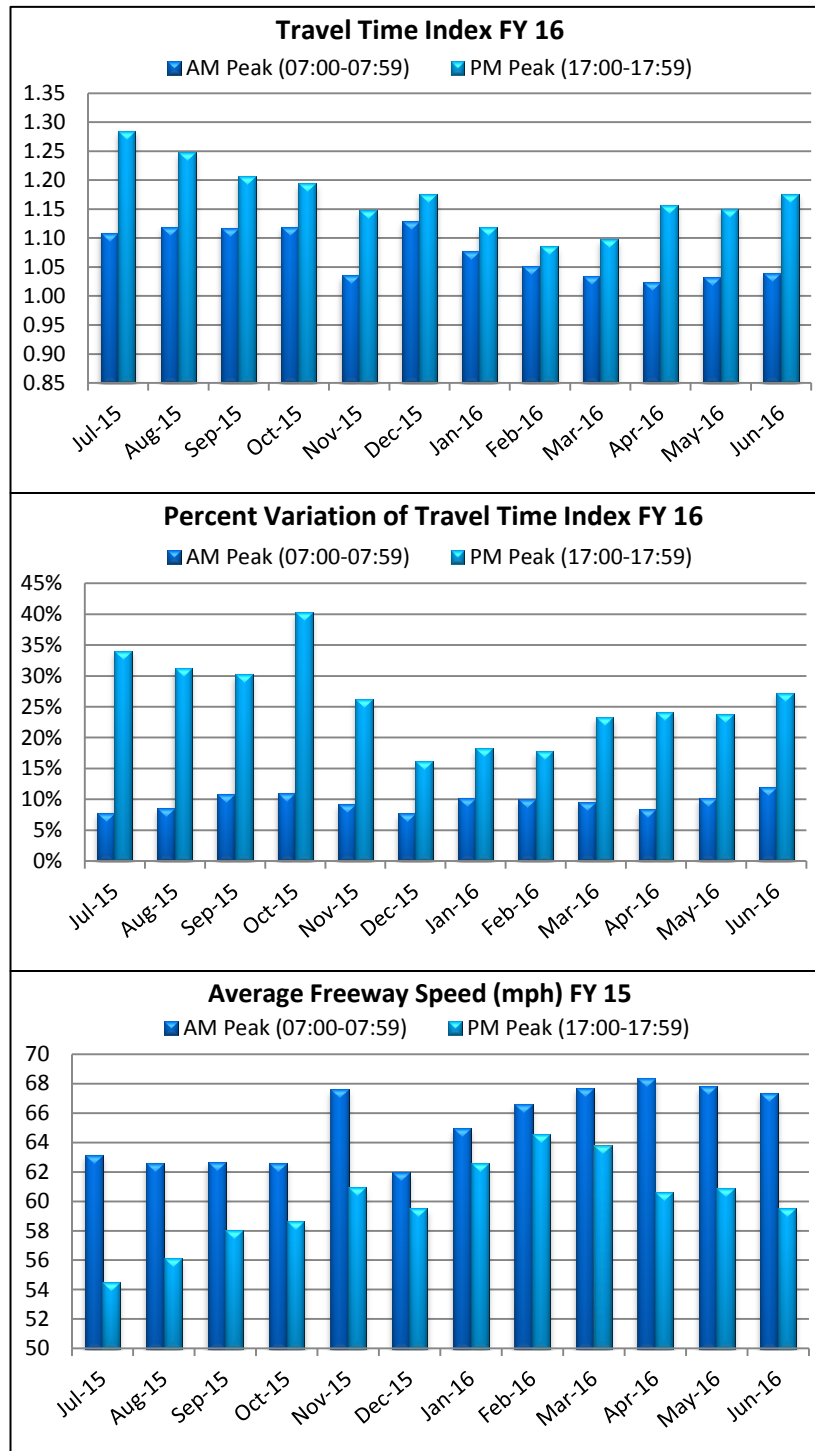
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.



Freeway Traffic Level of Service

Peak Travel Time Index by Segment for June 2016

(+) Direction (NB, EB, Clockwise)

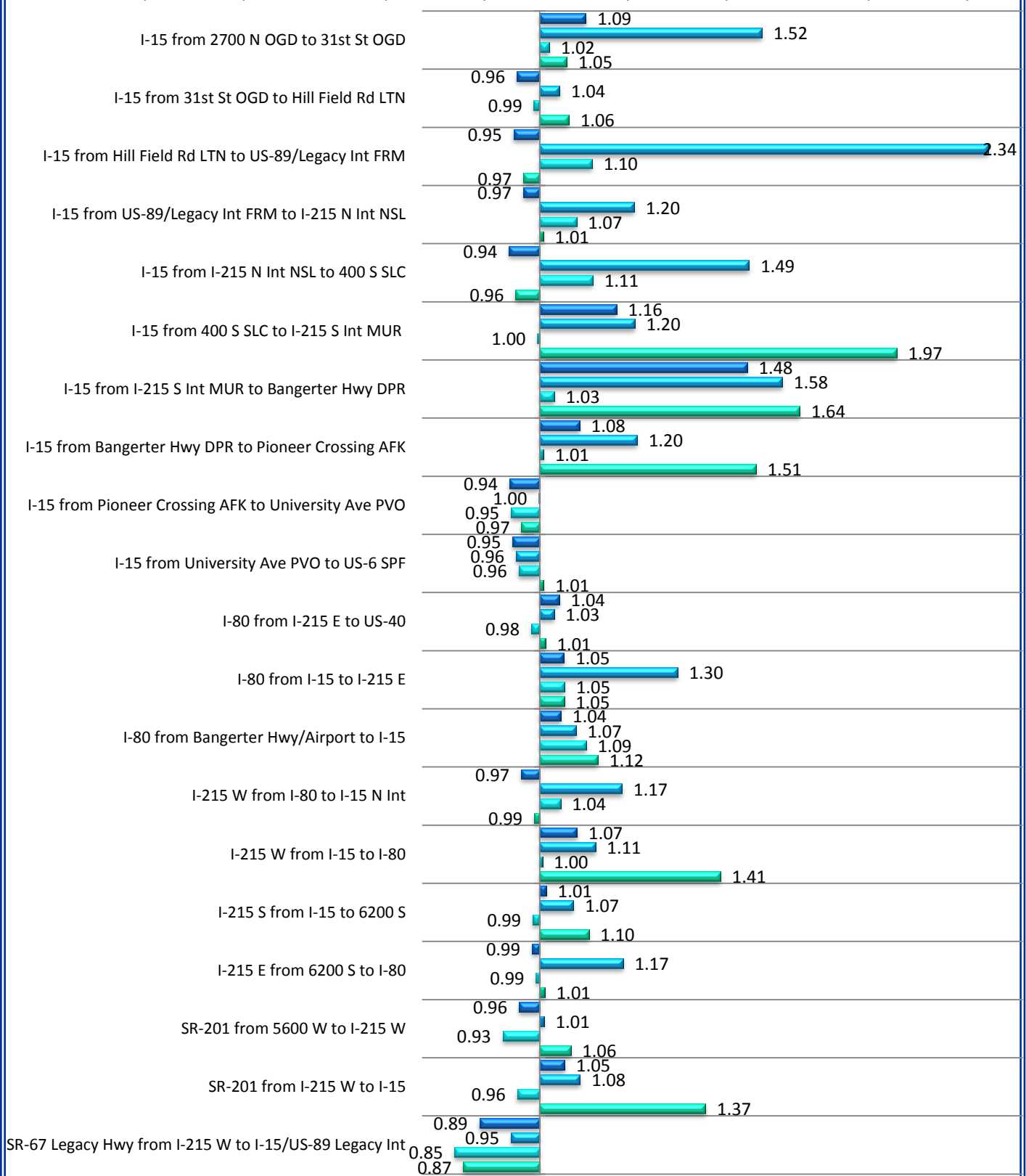
(-) Direction (SB, WB, Counter Clockwise)

■ AM Peak (07:00-07:59)

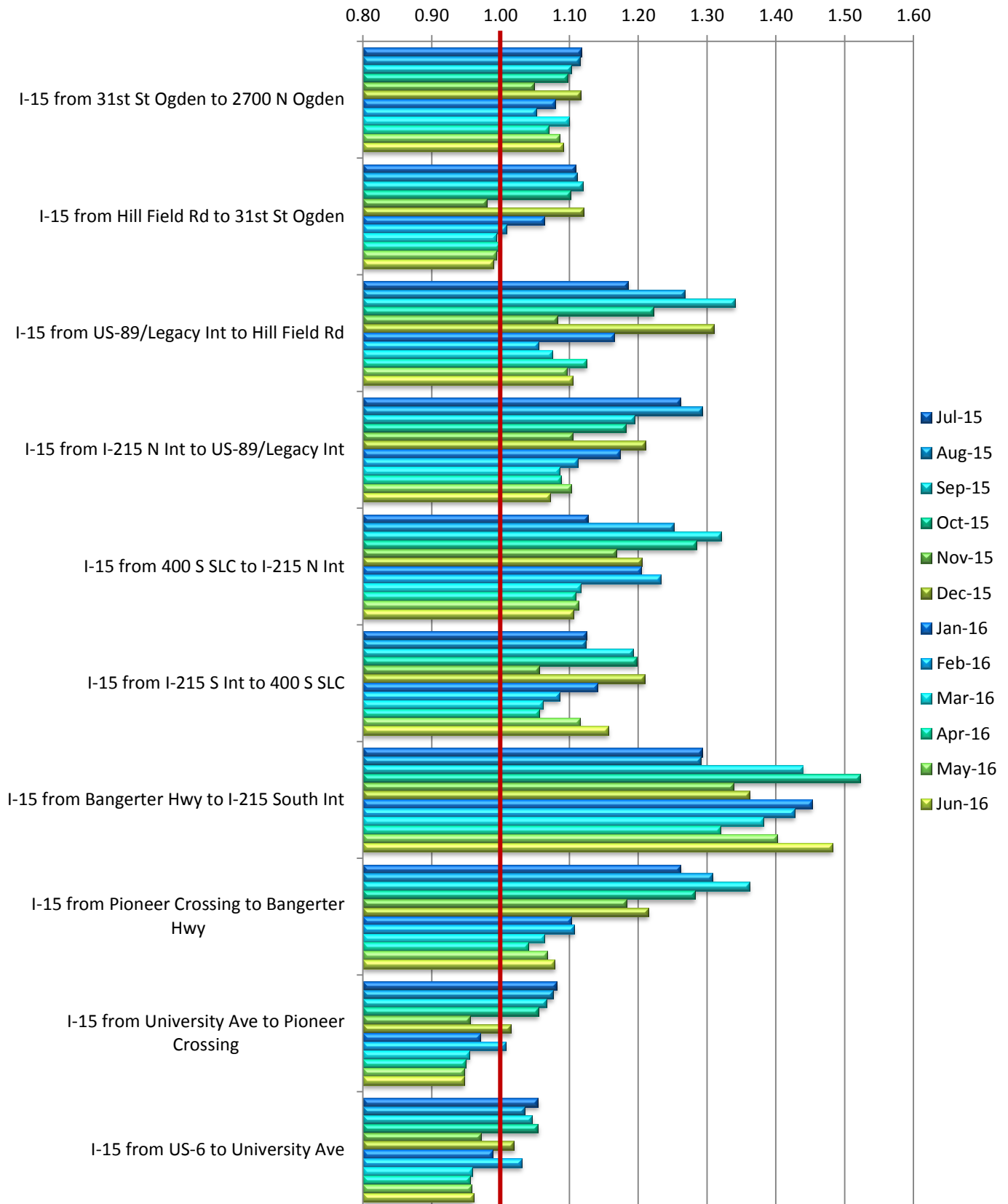
■ PM Peak (17:00-17:59)

■ AM Peak (07:00-07:59)

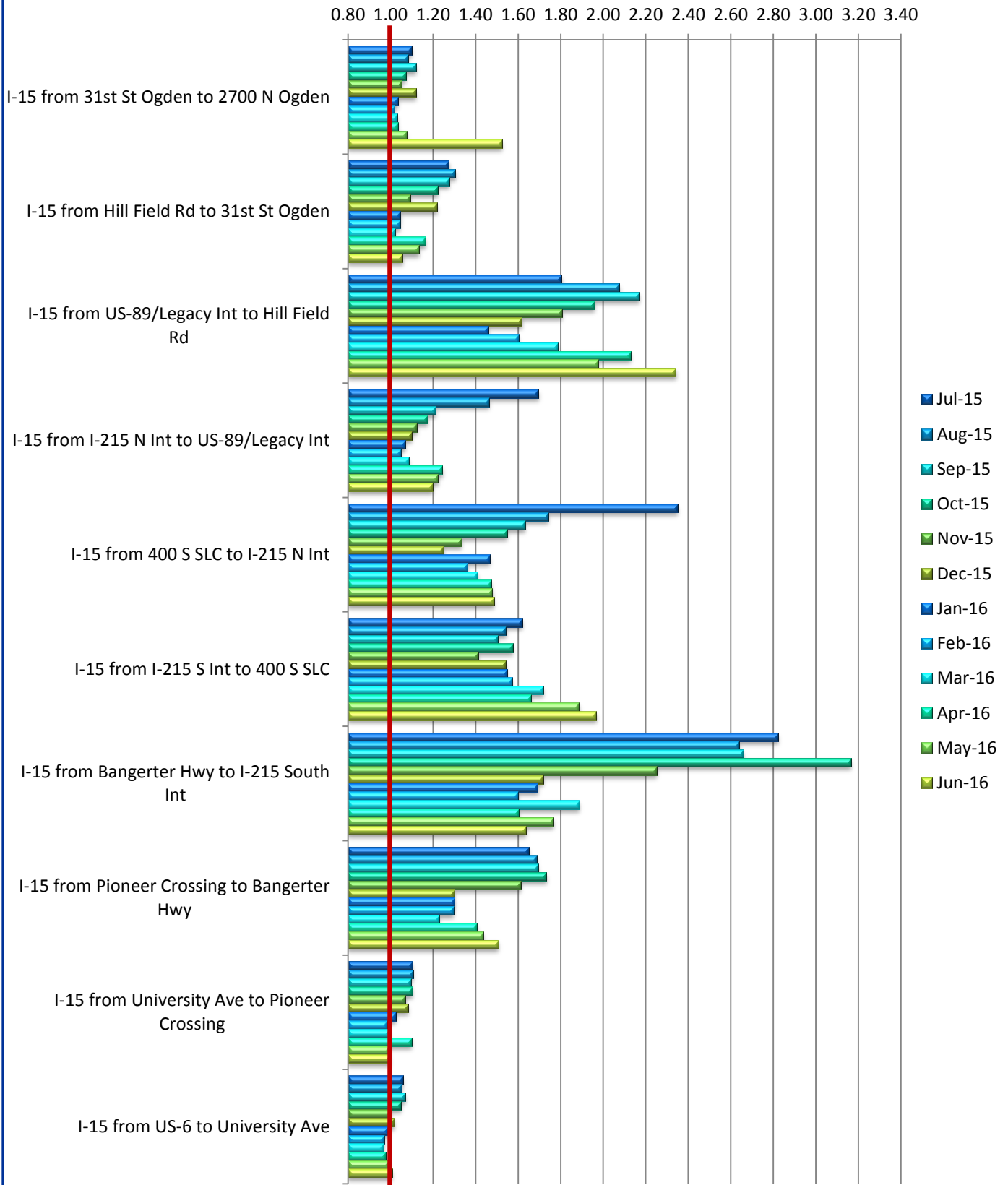
■ PM Peak (17:00-17:59)



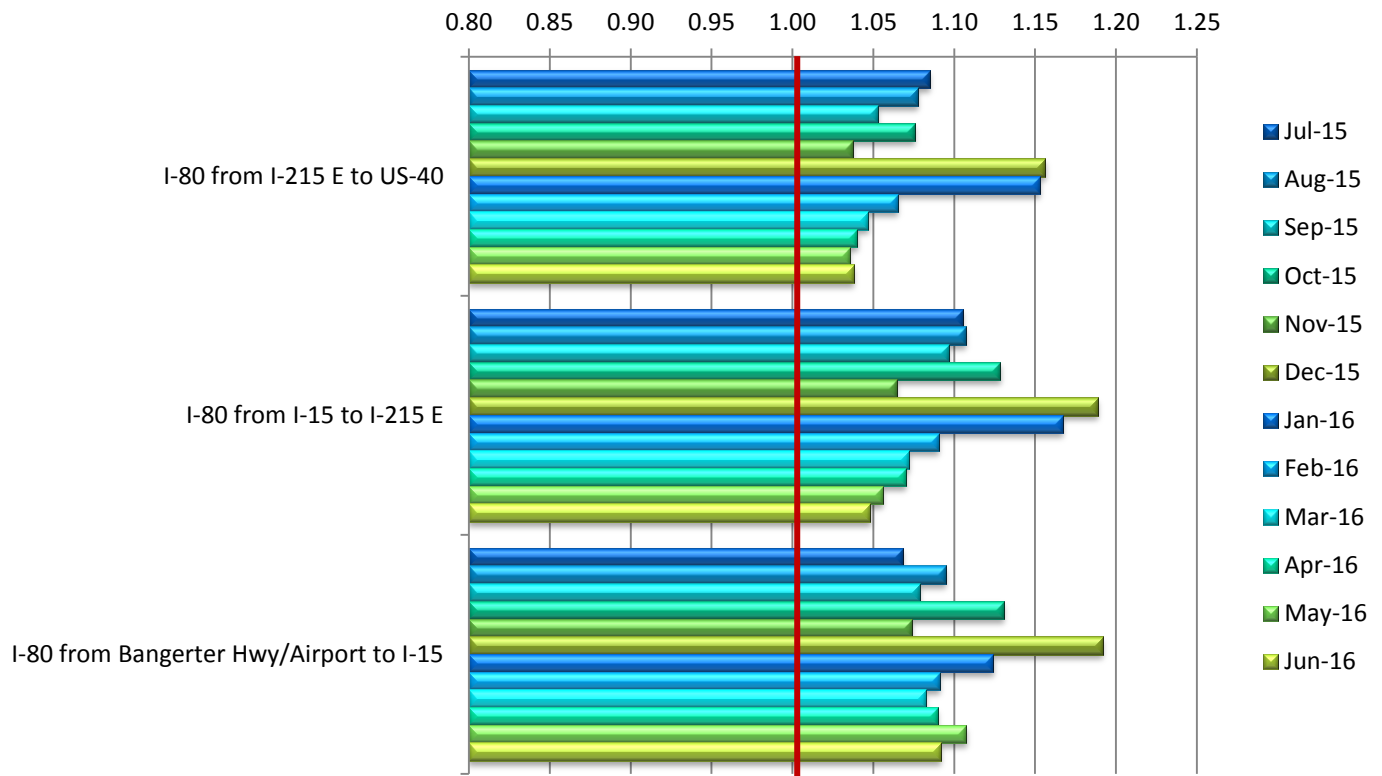
AM Peak Travel Time Index for I-15 FY 16



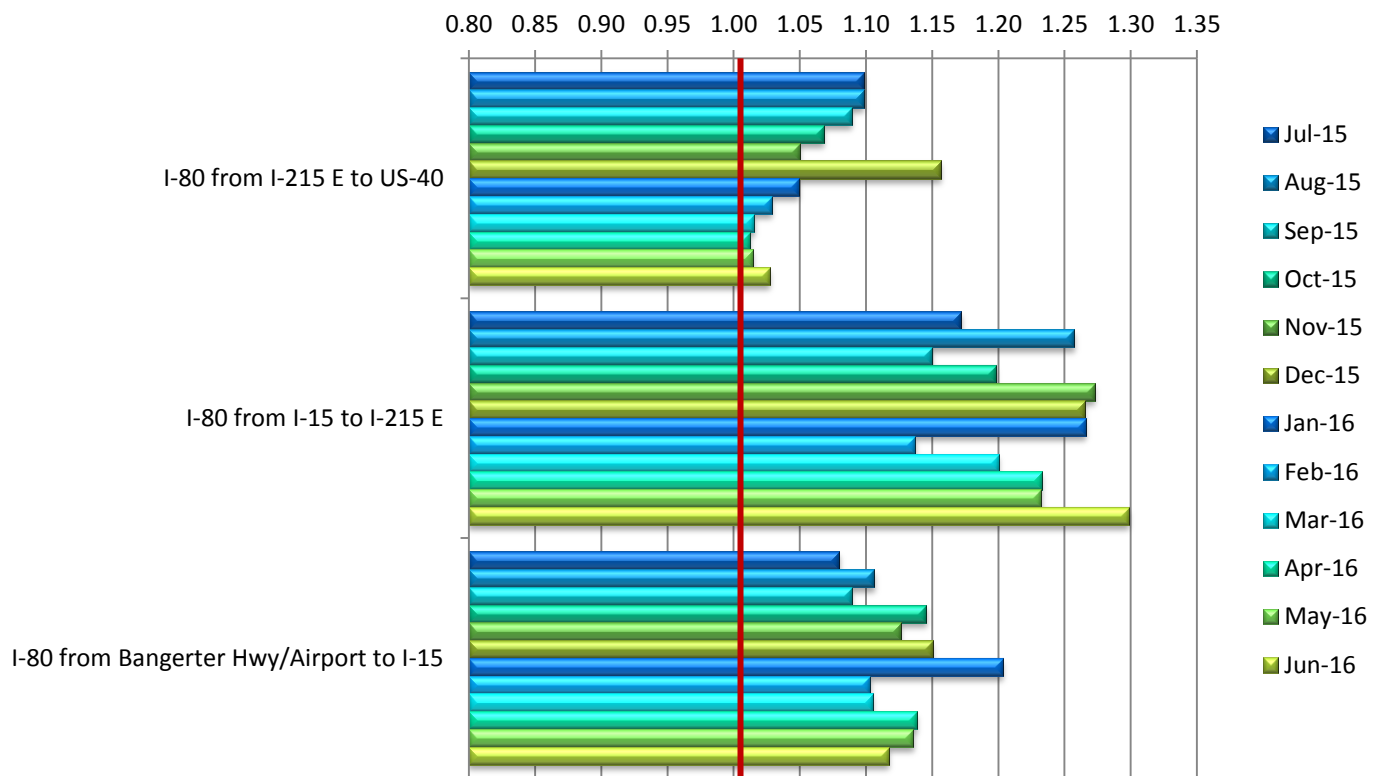
PM Peak Travel Time Index for I-15 FY 16



AM Peak Travel Time Index for I-80 FY 16

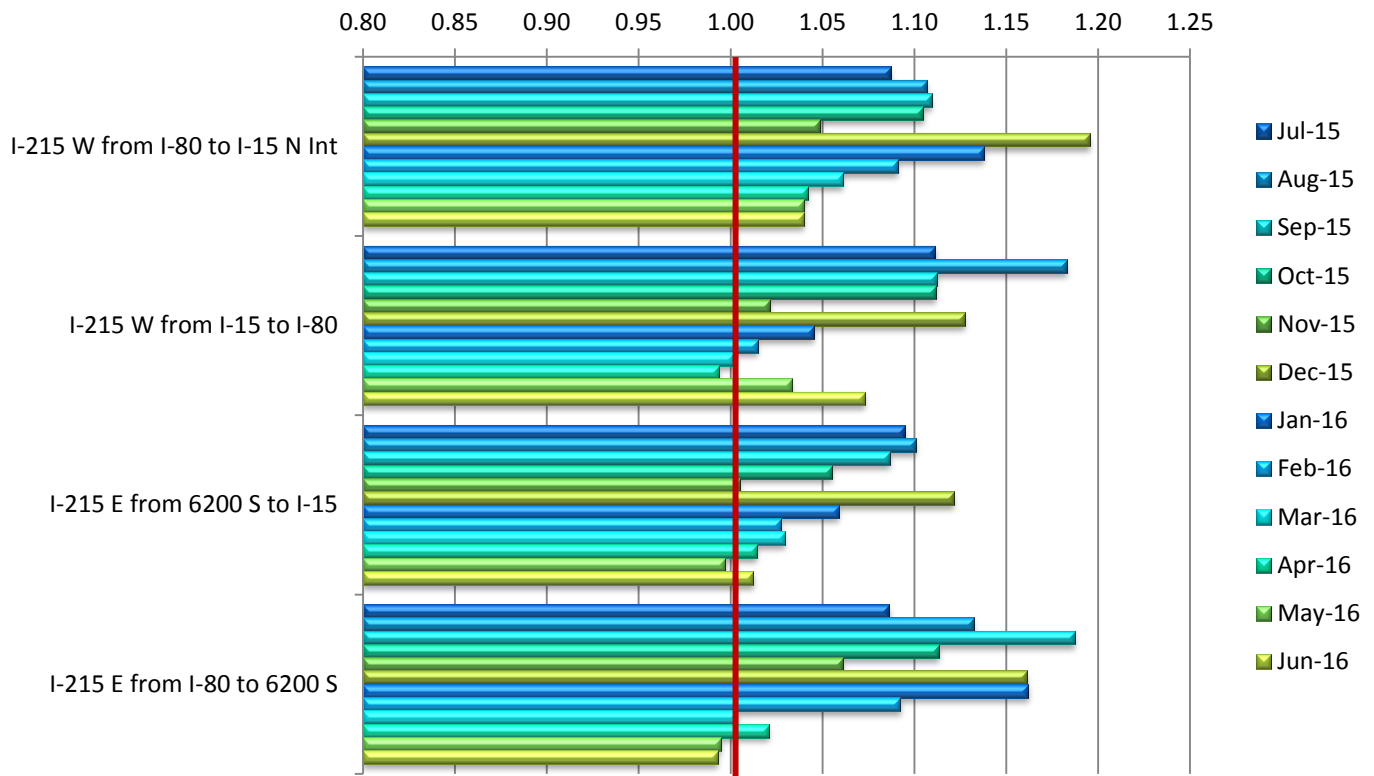


PM Peak Travel Time Index for I-80 FY 16

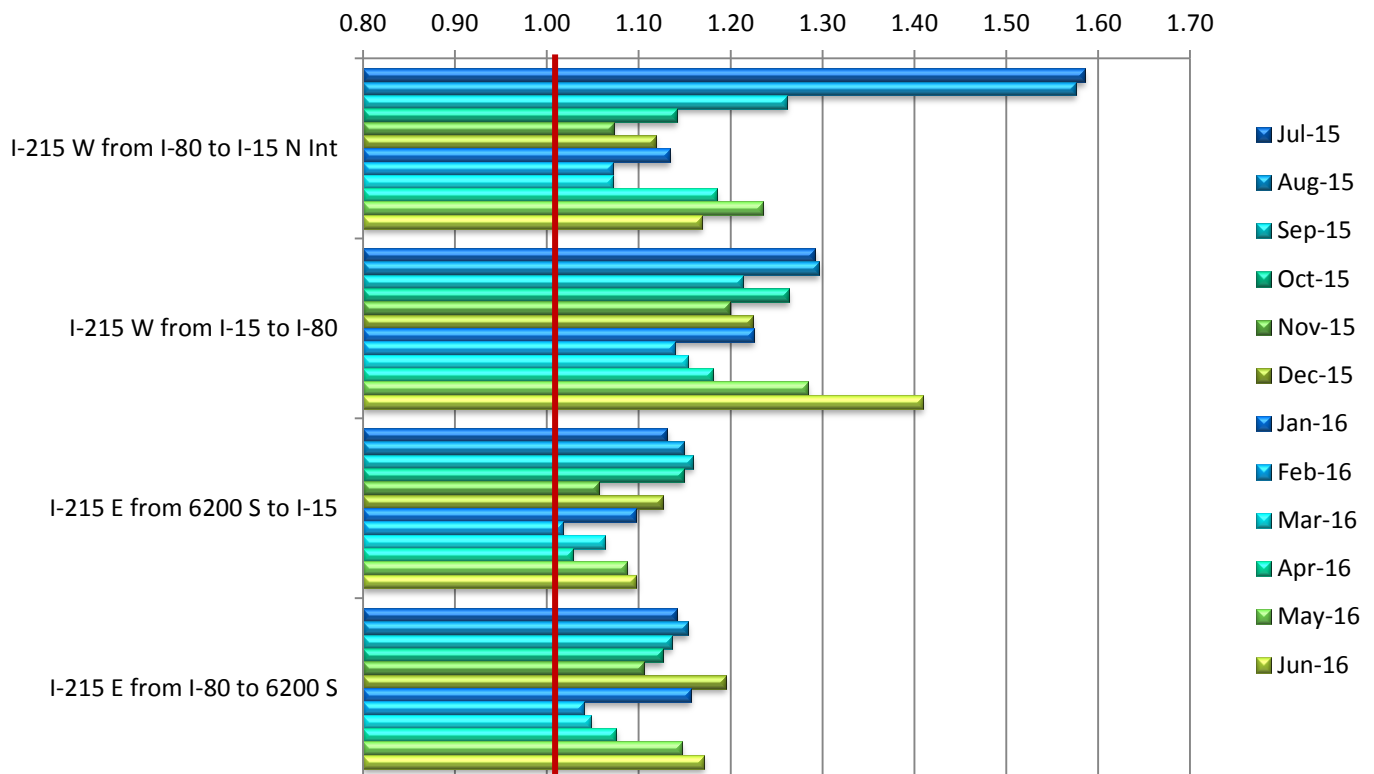


Freeway Traffic Level of Service

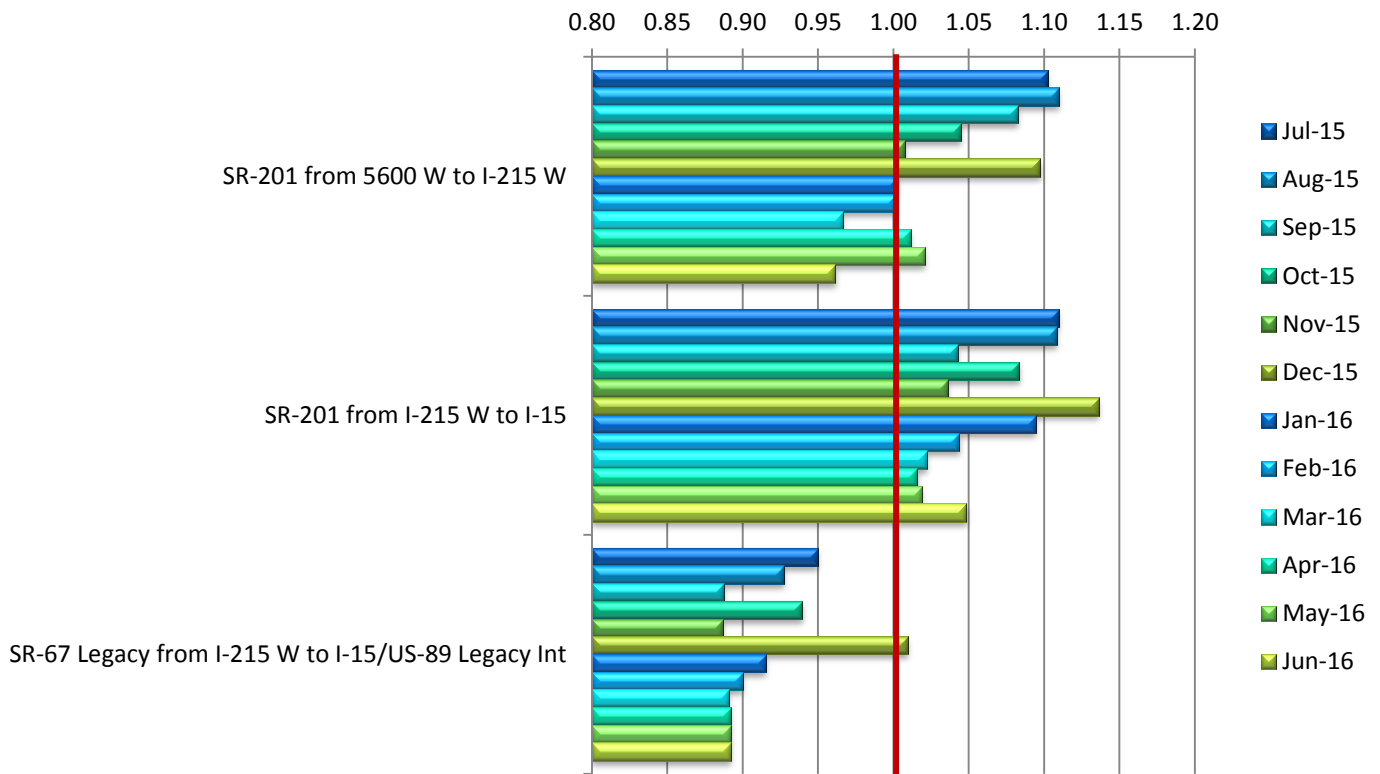
AM Peak Travel Time Index for I-215 FY 16



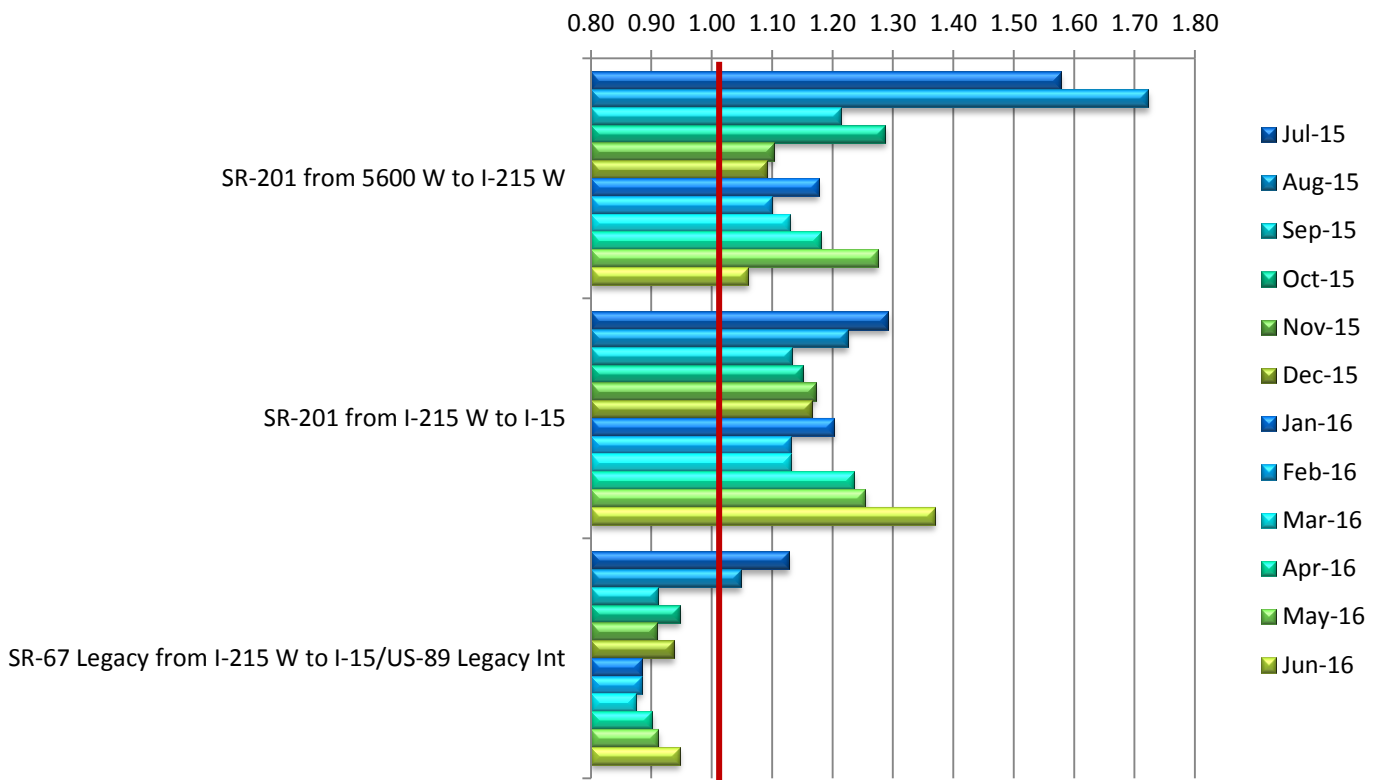
PM Peak Travel Time Index for I-215 FY 16



AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16

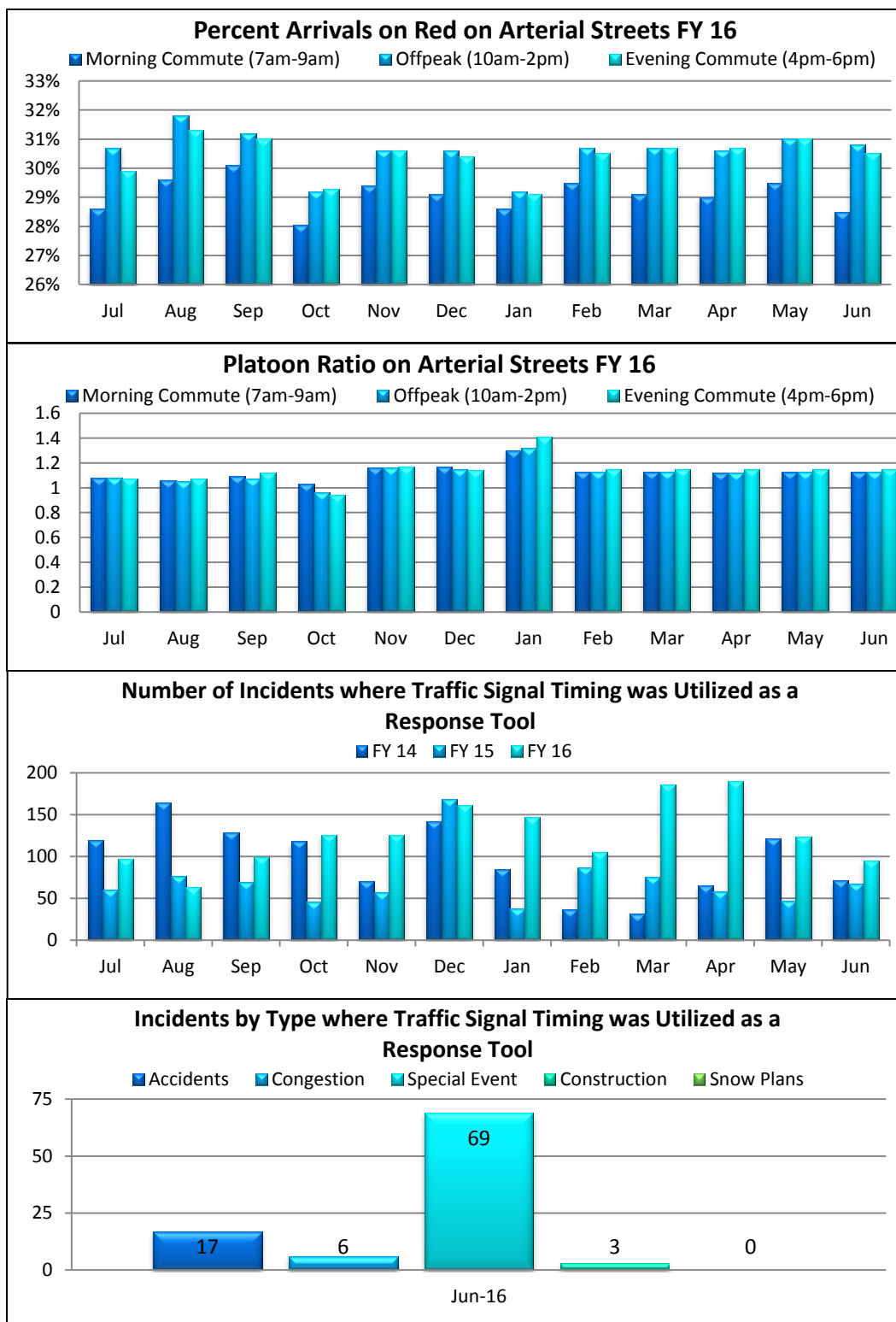


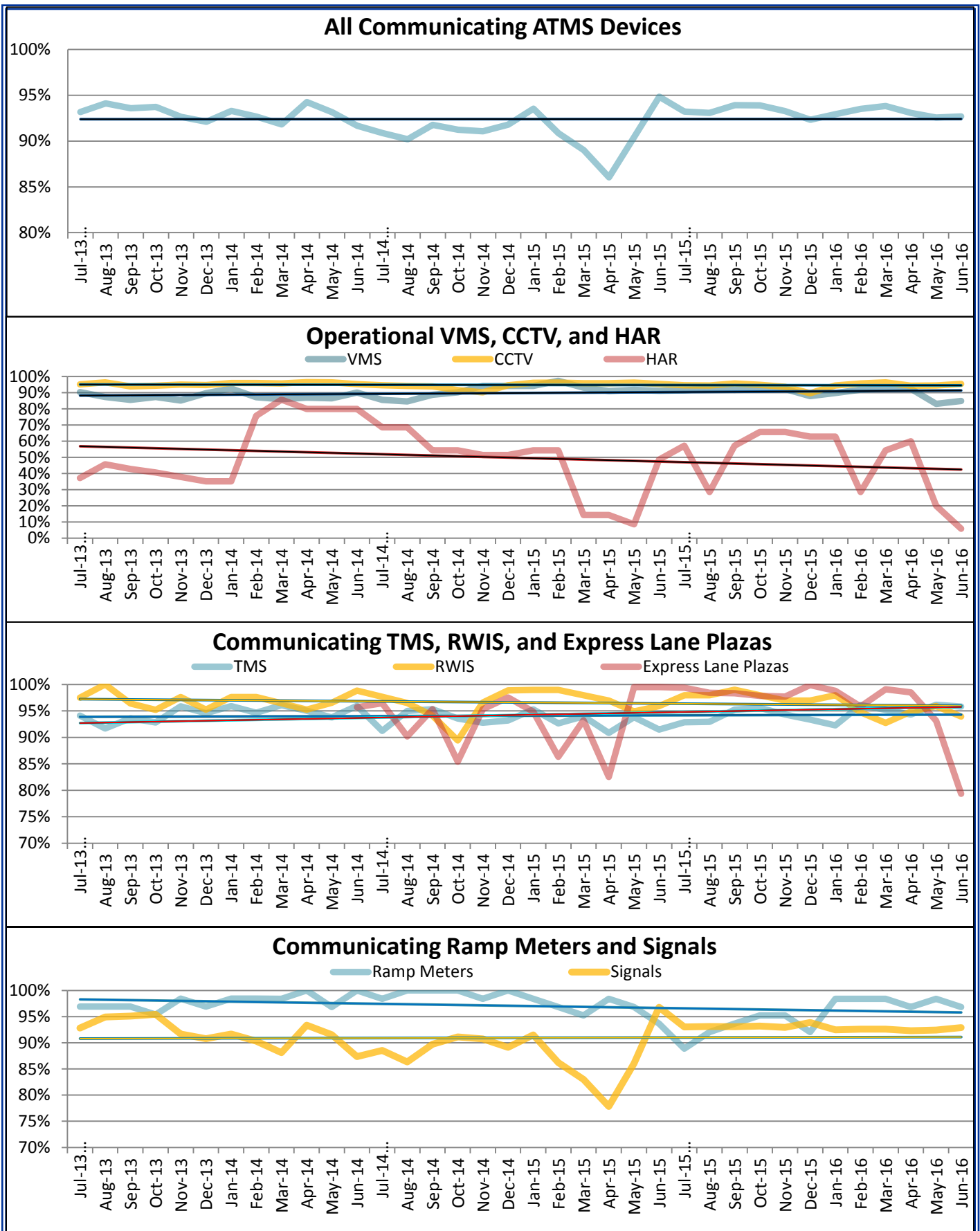
PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16

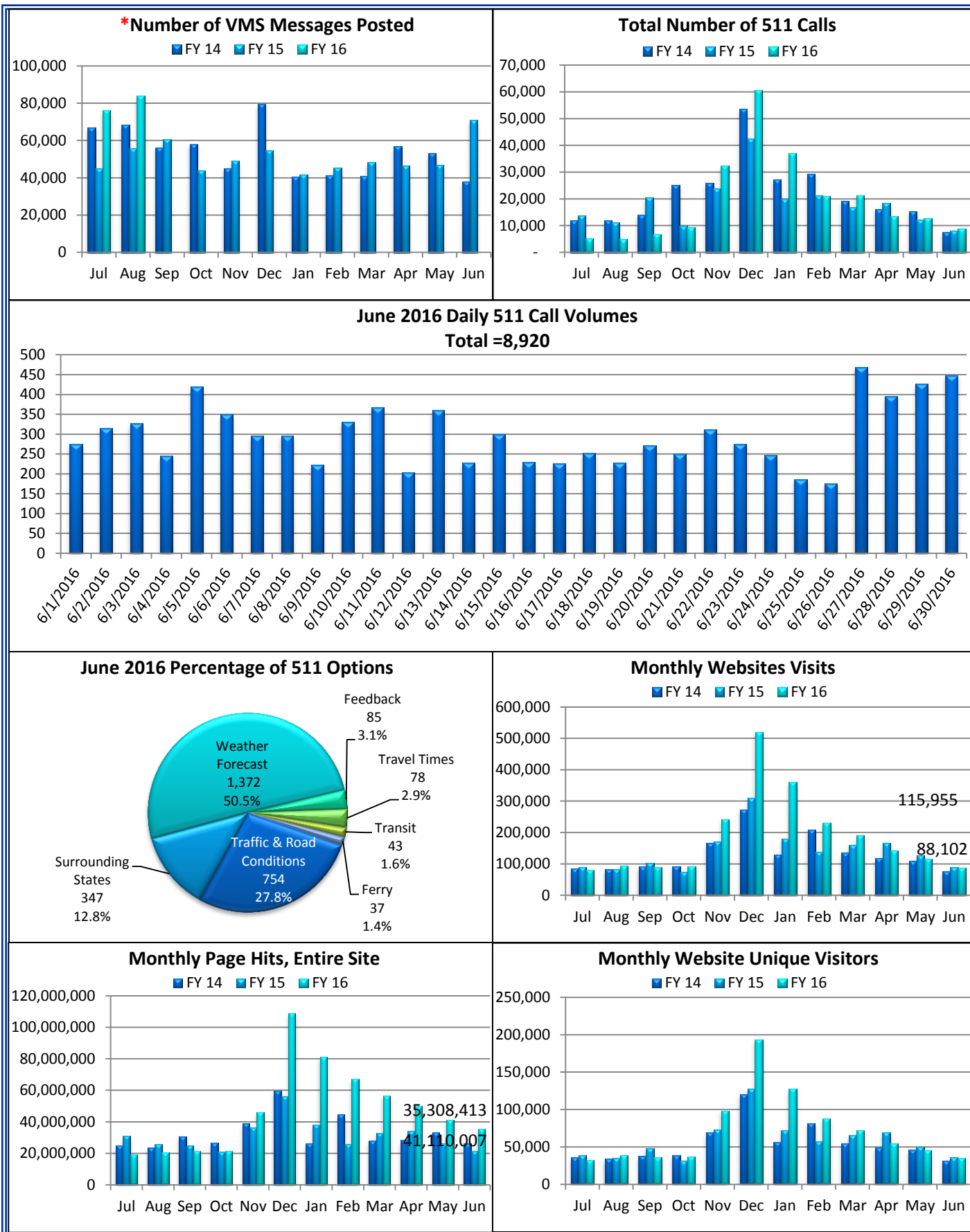


Arterial Traffic Level of Service

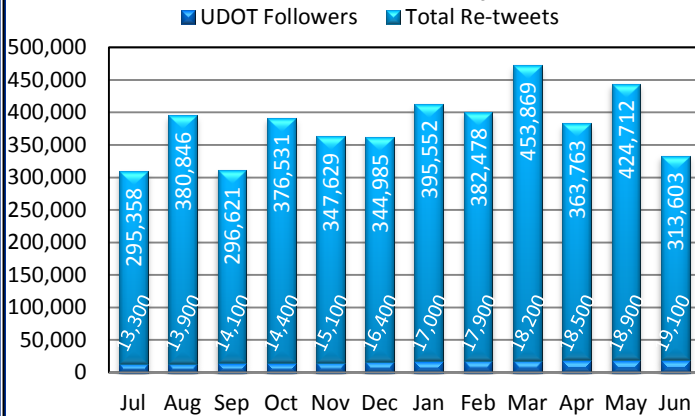
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.



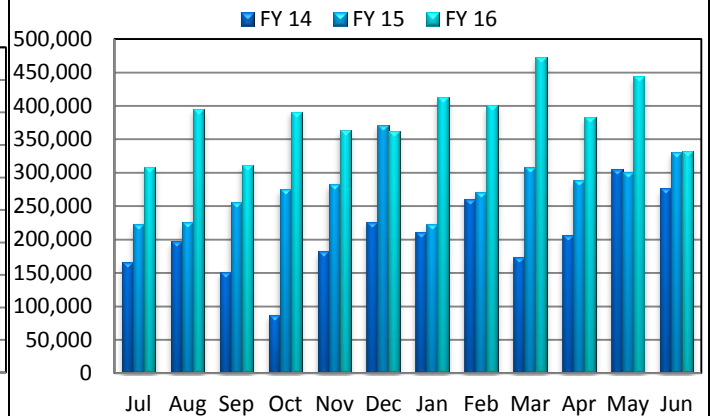




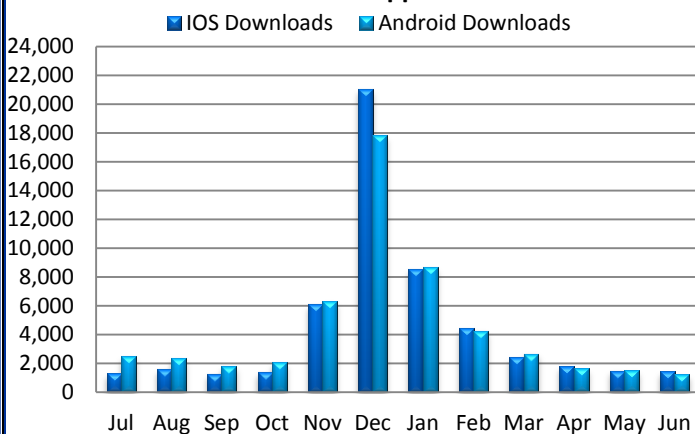
UDOT Traffic Twitter Activity - FY 16



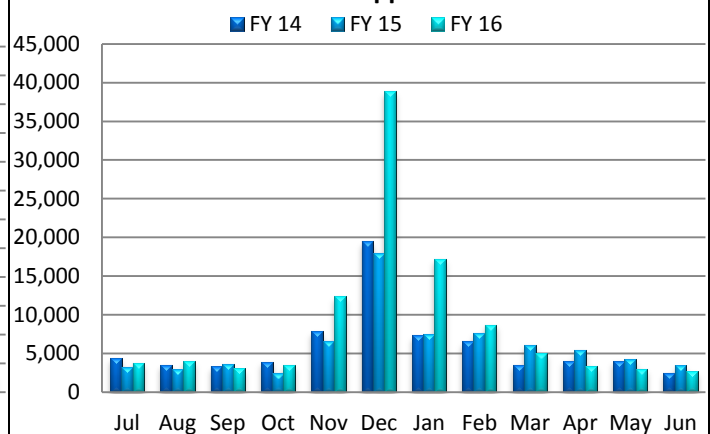
UDOT Traffic Followers and Re-tweets



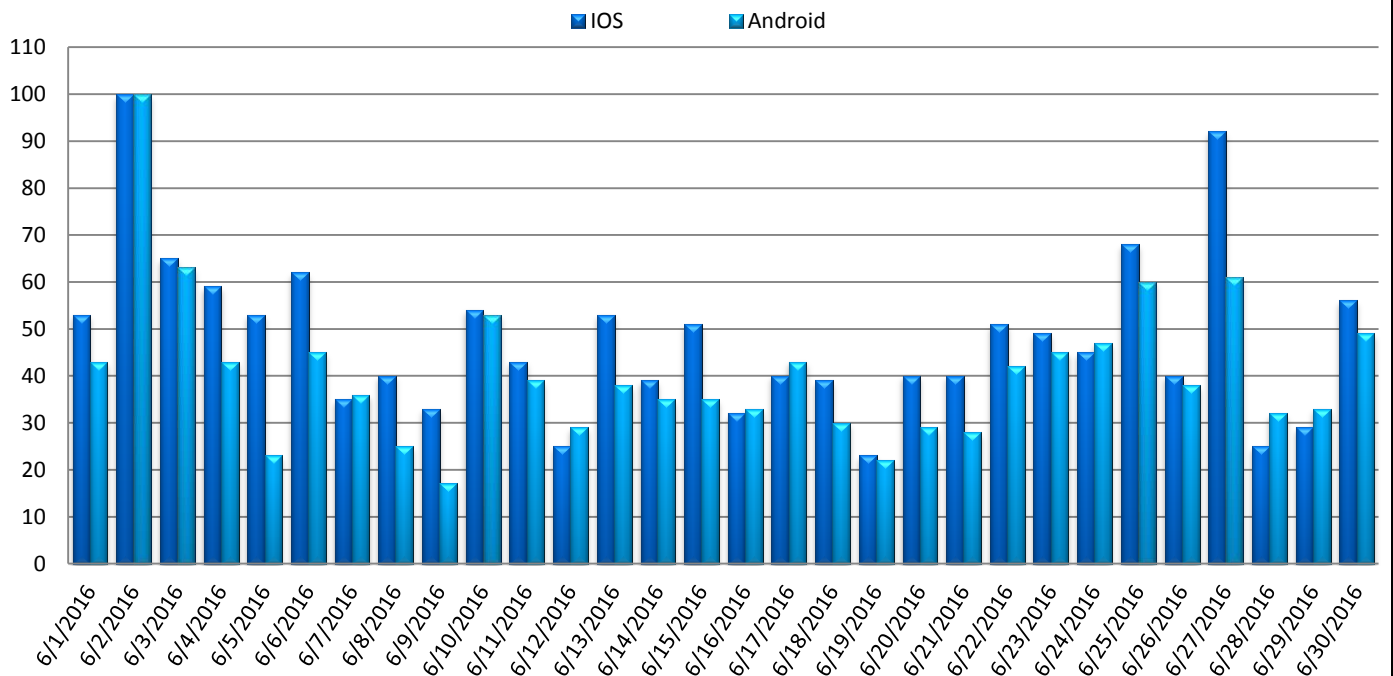
UDOT Traffic App - FY 16



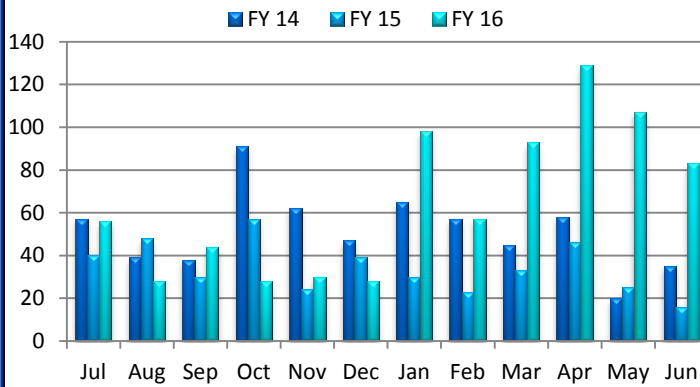
UDOT Traffic App Downloads



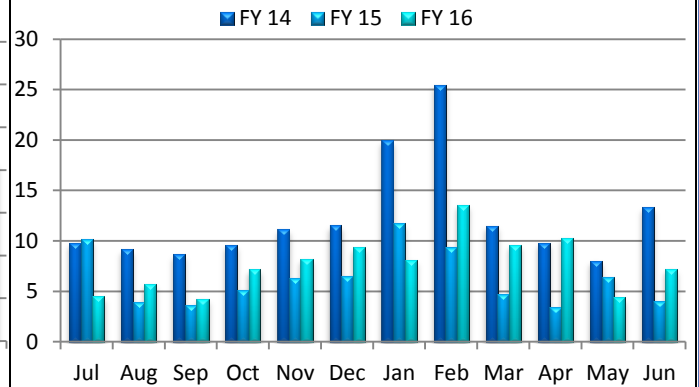
UDOT Traffic App Downloads - June 2016



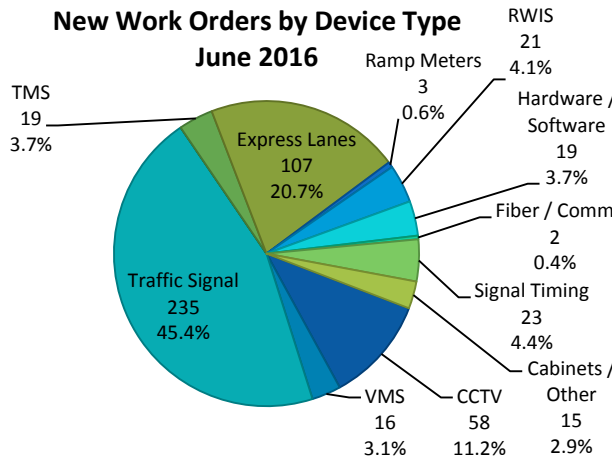
Number of "Ask UDOT Traffic" Questions



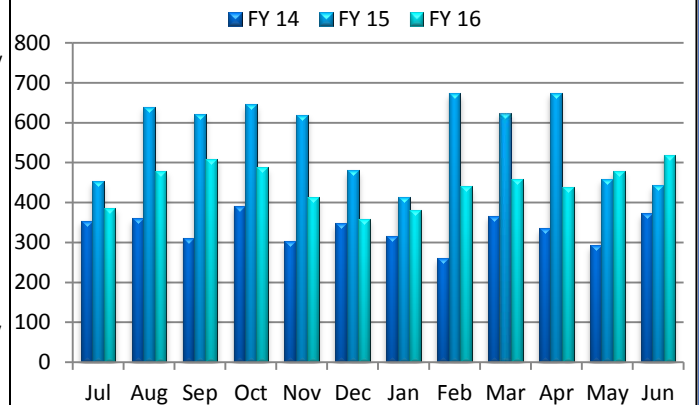
Overall Average Work Order Turnaround Days



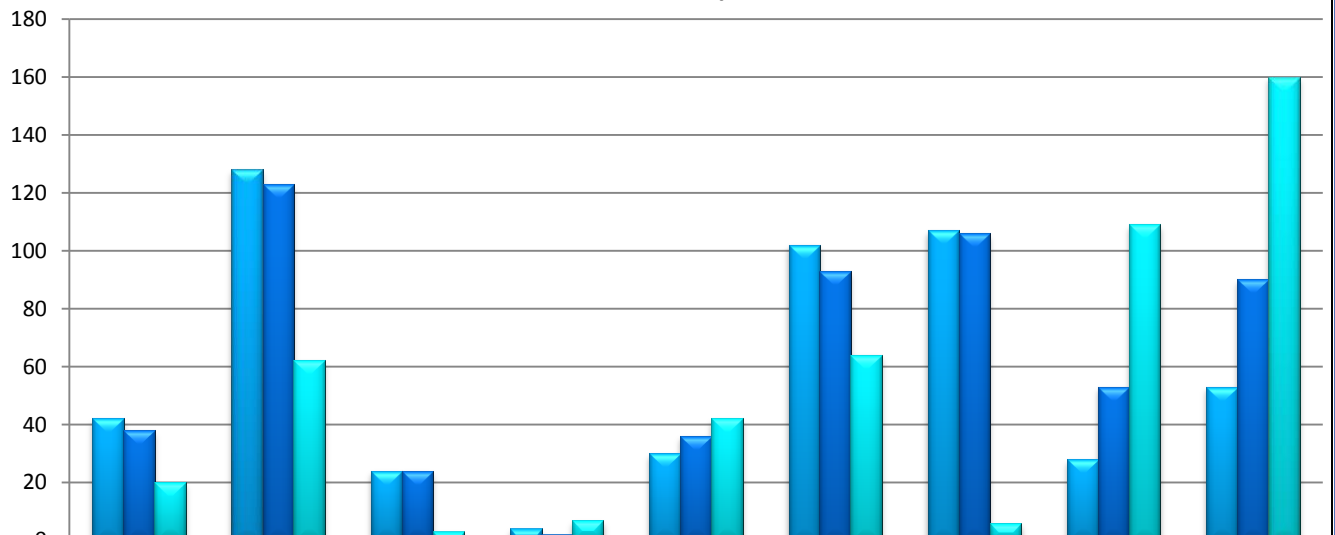
New Work Orders by Device Type June 2016



Number of New Work Orders



Work Order Statistics by Group - June 2016 Total New = 518, Closed = 565, Open = 473



	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	42	128	24	4	30	102	107	28	53
Closed	38	123	24	2	36	93	106	53	90
Open	20	62	3	7	42	64	6	109	160



CONTROL ROOM

A new version of TranSuite was deployed this past month. New features will improve using both a landmark and milepost to locate incidents, speed up locating incidents around the state, better estimate how an incident will affect traffic, and automate VMS messaging based on the type and location of an incident.

The Control Room used all tools available to support the bi-annual Hill AFB Warriors over the Wasatch Air Show to minimize traffic impact for this two day event, featuring the USAF Blue Angels Aerial Demonstration Team.

The Traffic Operations Center Liaison was activated only once in June.

TRAVELER INFORMATION

The Traveler Group coordinated the leadership team meeting with the Utah State Energy Lab, negotiated the 511 Convergys contract renewal, and continued to work on the UDOT TMD introduction video. The group coordinated with the regions to fund a winter chain-up project, and held a TI/OPS/Emergency Management discussion about better communication during emergencies.



WEATHER INFORMATION UDOT WEATHER GROUP

The Weather Group had 128 overall weather related interactions, 58 outgoing weather alerts, four NWS collaborations, and two road alerts.

Weather Group Statistics for June 2016

- ✓ 128 - Overall UDOT weather Interactions
- ✓ 58 - Outgoing weather alerts
- ✓ 2 – National Weather Service collaborations
- ✓ 1 - Road Weather Alert



CLIMATOLOGY

The entire state saw temperatures well above normal in June. The mean temperature at Salt Lake International Airport was 77.5 which was 7.8 degrees above normal. This tied with June 2015 as the hottest years on record. There were a few stormy days in mid-June that produced large hail in the Salt Lake Valley and monsoonal moisture crept up into Utah at the end of the month, but overall the state was drier than normal except near Wendover which saw 0.09" more than the average of 0.32".

WEATHER OPERATIONS

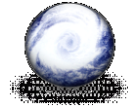
A post-season Snow and Ice Performance Measure committee meeting was held to discuss what has been developed and what will happen to prepare for the coming winter.

Jeff Williams attended an FHWA Road Weather Management Stakeholder meeting at the end of the month in Atlanta. He presented in two sessions and was on the Pathfinder Project panel. Jeff is also recently part of the FHWA's Every Day Counts (EDC-4) Weather Savvy Roads Innovations Deployment Team, focusing on the Pathfinder Project's deployment to other states. He also participated in a post-season conference call with Pathfinder Project states in June.

Jeff also met with oil tanker companies in Vernal to discuss Weather Cloud installations. Lastly, there were two tours of the TOC Weather Room in June: A group of Minnesota DOT engineers and members of the FHWA.



Preventative maintenance for spring was completed on all of UDOT's RWIS. A new RWIS near the Deer Creek Reservoir dam came online in order to assist in alerting for frost pockets in Provo Canyon.



During June, our RWIS at Bald Mountain Pass (Mirror Lake Highway) stopped working and we received the following public email:

*"Hello Udot Traffic,
One of my most favorite things in the world is the Mirror Lake Highway/ Bald Mountain Pass web camera. Lately I noticed that it hasn't been working. Does anyone at UDOT have an update on this camera?
I'd love to see it working soon.
Thanks!!!"*

The weather group was aware of the problem and the site was repaired shortly thereafter.

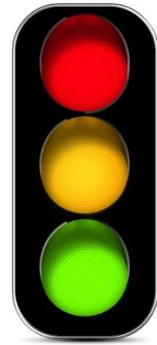
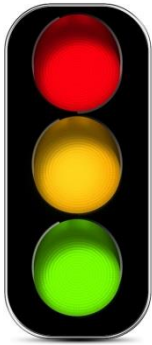
For the current monthly climate outlook, please visit: <http://www.nw-weather.net/UDOTMonthlyOutlook.pdf>

For the current seasonal outlook, please visit: <http://www.nw-weather.net/UDOTSeasonalOutlook.pdf>

TRAFFIC OPERATIONS AND REPORTING

- ❖ Involvement with the 4700 South/2700 West safety spot improvement project analysis.
- ❖ Visited the USU Energy Lab.
- ❖ SR-9 analysis at Zion National Park.
- ❖ The traffic plan for the DPS/UDOT Safety Fair.
- ❖ DDI safety assessment.
- ❖ Bangerter Highway interchanges.
- ❖ Four interchanges in Region 1.
- ❖ The Congestion Report..
- ❖ US-6 study in Spanish Fork.
- ❖ I-15 ICM Study.
- ❖ Provo Orem BRT.
- ❖ Project user costs.
- ❖ Smarter Work Zone webinar.
- ❖ Logan "Y" intersection analysis.
- ❖ ITS American annual conference.
- ❖ Beck St NB on-ramp MOT impacts.
- ❖ TIRTL testing on I-15.
- ❖ I-80 State Street EIS.
- ❖ 2017 Legislative interim committee preparation.
- ❖ Managed Motorways.
- ❖ Developing nighttime MOT standards.





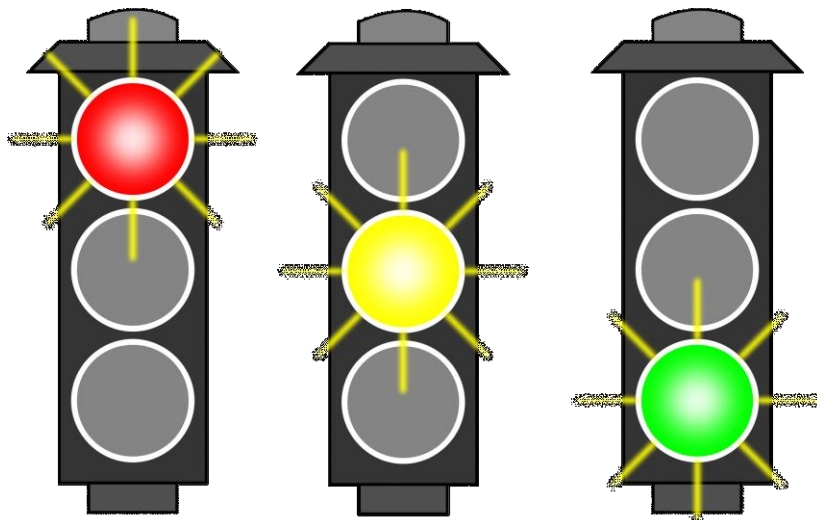
TRAFFIC SIGNAL OPERATIONS

Region 1 completed reconstructing SR-126/Antelope Drive signal, added a protected left turn on US-89 in Kaysville and Layton, and completed constructing a new signal at 400 North/I-15 in Marriott-Slaterville.

Region 2 has been working to complete signal preventative maintenance inspections with the goal set to complete half of the needed inspections by mid-year. The team inspected a carrier wire signal at 200 West Bangerter, preparing for the grade separated intersection at 600 West. The team also closed over 120 work orders this month.

Region 3 tested new signal timing plans on 800 North in Orem, adjusted signal timing and detection for several construction projects around the region, and turned on a new signal at SR-73 and Sunset Drive in Eagle Mountain.

Region 4 completed installing generator transfer switches throughout the region and distributed portable generators to maintenance sheds, installed Matrix detection at I-15 NB at Bluff Street (replacing failed detection loops), and worked with Washington City to test their MMUs.



ATMS MAINTENANCE

The Field Team continued the spring PMs throughout the state, repairing minor failures as they were found. An example of this is repairing a failing wire splice in a pole base by installing a splice box on the pole. This eliminated the splice inside the pole base which was damp and would cause the splice to fail in the future. The team repaired a sign damaged by a vehicle crash in Pleasant Grove. The sign repair included rebuilding the sign base, repairing the sign itself, and pulling new wire. The team worked to get VMSs in St. George and Hanksville on line and operational prior to the 4th of July holiday and helped with traffic control at the DPS and UDOT Safety Fair. The team performed an LFOT for a local government project in Orem and assisted in troubleshooting a faulty fiber switch in Riverton.

The Team closed 72 work orders this month.

The Lab Team troubleshooted and repaired 18 devices, tested and burned-in two signal cabinets, replaced a cabinet in Clearfield damaged by a vehicle, and released a cabinet to be installed on a project. The team completed several electrical inspections on the I-15 Point Project, upgraded a VMS and CCTV on I-70, participated with installing a TIRTL detection system on I-15, and deployed two portable VMS for the Warriors Over The Wasatch Air Show at HAFB. Assistance was given to Region 3 to install Driver Feedback signs. The team burned in and tested four VMS prior to installation. The team also completed 40 TMS PM's, closed 11 work orders and assisted with traffic control at the DPS/UDOT Safety Fair.

The Express Lanes Team closed 106 work orders, repaired and programmed 24 lane controllers and two lasers, rebooted 16 lane controllers, four lasers, and a VTMS. Seven pucks were calibrated, and PMs were performed on 12 cabinets. The team replaced a CAT-5 cable for a VTMS and connectors between a reader and the antenna, and two Ethernet relay radios were installed.



ITS ASSET MANAGEMENT

The ITS Asset Management Team integrated four TMS, four surface street CCTV, two weather CCTVs, two RWIS, six surface street VMS, and two signals.

The team also reorganized the Communication Hub information in AIMS and addressed ATMS devices to be installed and integrated on the I-15 Point Project.

Region 1

- ❖ **Statewide Signal Interconnect:** This has been changed to a larger scope and will be called Statewide Signal Interconnect. PineTop Engineering has been working on the design for this to advertise. This is ready for PS&E review.
- ❖ **SR-193 and Greyhawk:** Construction complete, integration in process.
- ❖ **SR-232 Hillfield Rd. Interchange:** Under construction.
- ❖ **28th Street and Washington:** Construction complete, integration in process.
- ❖ **SR-126 & 1300 N:** Construction complete, integration in process.
- ❖ **I-15; SR-30 to the Idaho State line:** This project may be part of a partnership with a telecom.
- ❖ **Layton Interchange:** This project is in design.
- ❖ **SR-127 & 3000 W:** Construction complete, integration in process.
- ❖ **Logan Main Street Fiber Interconnect:** This project has been completed. Integration to the UDOT network has also been completed.
- ❖ **US-89; SR-193 to Cornia Drive:** This project is complete.
- ❖ **US-89; Antelope Drive Extension:** Construction complete, integration in process.
- ❖ **Logan CCTV's:** This project has been completed and the 30 day burn in is underway.

Region 3

- ❖ **SR-92 CCTV/Hybrid VMS (12641):** Repaired wind damage. Began project close-out.
- ❖ **Region 3 traffic signal connections (12774):** SR-198 @ Woodland Hills + CCTV, SR-198 @ 400 North, and SR-198 @ Main St + CCTV in Salem via wireless radio connection. Installed radios.
- ❖ **US-40 CCTV/Signal connections (12805):** STRATA installed connection electronics to eight signals in the basin area. Due to issues with STRATA links, hub switch installation re-scheduled for July.
- ❖ **Provo Canyon RWIS/VMS (11410):** RWIS Installations under construction.
- ❖ **US-189; State Park to Rock Cut passing Lanes (11415):** Project under construction. Received ATMS State Furnished Materials. Hired Integrator.
- ❖ **Spanish Fork; SR-156; 300 South to M.P. 2 (9976):** Project under construction. Hired Integrator.
- ❖ **Provo; SR-256; 800 East to University Ave BRT (10266):** ATMS design of micro fiber and two CCTV's ongoing. Received first round of ATMS State Furnished Materials.
- ❖ **Spanish Fork; Canyon Rd @ 2550 E signal (10960):** Project under construction.
- ❖ **Provo; US-89 (300 S); 100 East to 700 East (10137):** Project under construction.
- ❖ **Lindon; US-89 @ Center St. (12839):** Project complete.
- ❖ **Utah Co. Signal Interconnect (13244):** Held PS&E.
- ❖ **Eagle Mountain; SR-73 @ Sunset Dr. (13217):** Project under construction.
- ❖ **I-15 Fiber; Payson to Santaquin (14149):** Put design contract on hold to evaluate project budget.
- ❖ **Pleasant Grove; US-89 @ 200/220 South (14683):** Held PS&E.
- ❖ **Highland; SR-92 @ 6400 West Signal (14595):** Held kick-off and plan-in-hand meetings.
- ❖ **American Fork; US-89 @ Main St./200 East (13061):** Held plan-in-hand.

Region 4

- ❖ **St. George:** This project is complete, except for some city and UDOT fiber coordination.
- ❖ **Pine Creek Truck Climbing Lane:** Construction complete, integration in process.
- ❖ **Fiber upgrade for US-6, Helper and Price Signal Integration:** Telecom work has been completed. UDOT is ready to complete the final contractor package for a procurement contract. The package is ready and meetings with Region 4 staff have been scheduled to make sure all certifications and checklists have been satisfied. We are ready to procure a contractor after some finalization with the region. All signals in Price have been integrated.
- ❖ **Beaver Truck Climbing Lane:** Construction complete, integration in process.
- ❖ **I-15; North Beaver to Manderfield:** This project is complete. Solar sites and CCTV locations to be re-located are being mitigated.
- ❖ **Cedar City Fiber:** Under construction.
- ❖ **Price, Helper fiber and Interconnect:** This project has been completed.
- ❖ **Beaver Shed and Fiber HUB:** Under construction.
- ❖ **Arches CCTV:** Waiting for Rocky Mountain Power.
- ❖ **Bryce Signal:** The contractor is looking into the splicing and construction details.



Good morning TMD!

It is that time of year again to pause and recognize the excellence in performance that we see around us on a regular basis. I am continually amazed at the talent and dedication of the people in the Traffic Management Division. You make this a wonderful place to work.

There were many great examples to consider this year, and it was difficult to narrow the field. I am pleased to recognize the following individuals as the 2016 Employee of the Year and Leader of the Year. Also noted are the others considered for the award this year. Please take a moment and congratulate these folks on their achievement.

Rob Clayton

2016 TMD Employee of the Year

Richard Shelley is the Traffic Management Division's 2016 Employee of the Year. Richard's primary responsibility is to coordinate the TMD's financial transactions and records. His dedication to these responsibilities is readily apparent to anybody that deals with budgets, procurement and billing, both within the TMD and in other groups. Richard is a great resource for TMD project and program managers, regularly going beyond his assigned duties to help reach the desired outcome. More than one TMD manager has expressed, "I don't know what we would do without Richard." On the budget side Richard is instrumental in helping the TMD manage to its budget, but not over, year in and year out. He continually looks for ways to be cost effective as stewards of public money, while upholding procurement rules. There are countless examples of Richard finding cheaper ways to accomplish tasks, which has saved the TMD and the taxpayers many, many dollars. Richard has also managed several projects to improve the function of the TOC building, including the recent security enhancement project that installed CCTV cameras around the TOC campus and at our fiber hubs. He worked with Mark Taylor and Central to reorganize the service at the Central Warehouse for state furnished materials. He also assisted Mark in procuring the generators needed to implement the new statewide emergency traffic signal operations plan. Richard is also active on the "people" side of our business, organizing the teddy bear program for IMT and law enforcement and helping to organize TMD parties and functions. For all that you do to make the TMD a great place to work - Thank you Richard!

EMPLOYEE OF THE YEAR

Also nominated for Employee of the Year: Teri Gaus,
Kyle Wright, Grant Farnsworth, Thomas Hammon, Travis White



2016 TMD Leader of the Year

Blaine Leonard is the Traffic Management Division's 2016 Leader of the Year. Blaine is our ITS Program Manager, with responsibility for statewide ITS planning and deployment. He also leads UDOT's Connected Vehicle efforts. Among Blaine's most significant recent accomplishments is the i2 traffic signal control software replacement project, which resulted in UDOT, along with our local government partners, selecting and implementing Intelight's Maxview software. One of Utah's most valuable assets is the unity we have statewide with our local governments over traffic signal connectivity and control. Blaine created an inclusive procurement process for our partners that resulted in local government partnerships that are stronger than ever. Blaine is also moving UDOT forward aggressively on the Connected Vehicle front. Blaine is leading on CV on the national level where he has become a respected resource for AASHTO, serving on multiple committees. He is also building partnerships on the local level, most notably with UTA where we will soon implement a "smart" transit priority system that aims to effectively balance the needs of drivers, transit, and other users. Blaine is also working with Peloton, a technology company that recently demonstrated its ability to platoon heavy trucks at reduced headways on I-80 in Utah. There are significant fuel and safety benefits to this technology, which will help support the Utah economy. Compare Blaine's efforts and outcomes with UDOT's mission, strategic goals, emphasis areas and core values and you will find that Blaine's leadership is making a difference. Thank you, Blaine, for fearlessly accepting challenging assignments without a "playbook"!

Also nominated for Leader of the Year: Corey Coulam, Matt Luker, Jamie Mackey

LEADER OF THE YEAR



TMD Operation Highlights

Blaine and Richard will represent the TMD for consideration of these awards at the Operations Group Level. Awards for EOY and LOY for all of UDOT will be announced at the 2016 UDOT Annual Conference.

The Following Service Awards were also given.

Zeke Gonzalez – 30 Years

Brad Cameron – 20 Years

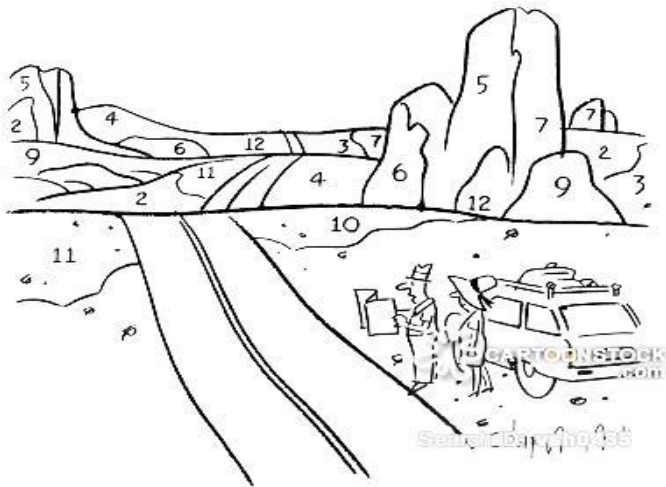
Matt Smith – 20 Years

Mark Taylor – 15 Years

Lisa Miller – 5 Years

Thank you for your dedicated service.

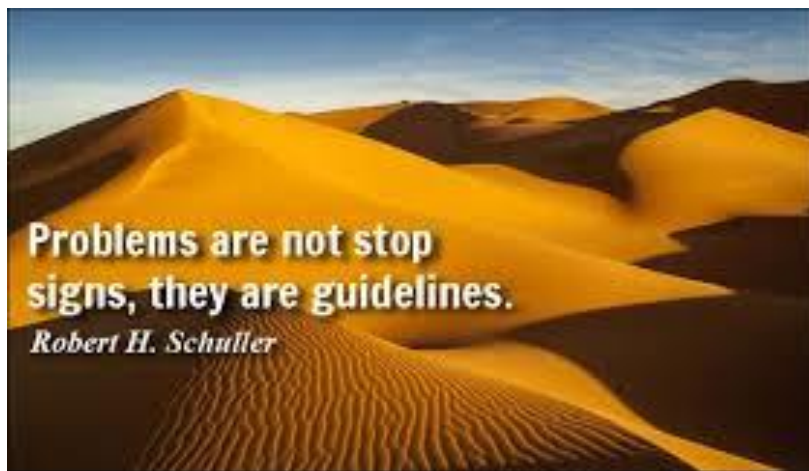




"Here it is on the map - the unpainted desert."



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Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign

